Rowe-Johnson, Sharon

From: Amarello, Susan
Sent: Monday, October 29, 2007 11:17 AM
To: Rowe-Johnson, Sharon
Subject: FW: general permit for emergency generators

-----Original Message-----
From: Tom Balon [mailto:tbalon@mjbradley.com]
Sent: Wednesday, October 10, 2007 5:16 PM
To: Babbidge, Tracy
Subject: general permit for emergency generators

Tracy,

>The first issue I see is that the 0.0295 lb/mWh equates to 0.01
>g/bhp-hr, which is a potential problem when the non-road rule has a
>limit of 0.02 g/bhp-hr for Tier 4 new engines.
>
>Also the 0.0086 lb/mmBtu is referenced as an output standard as far as
>conversion to lb/MW-hr, when lb/mmBtu standards are usually on an input basis.
>
>0.02 g/bhp-hr equates to 0.027 g/kw-hr or 26.8 g/MW-hr or 0.06 lb/MW-hr
>or about twice the value in the draft rule.
>
>While there are 3413 kw-hr in a Btu it would actually take 8000 to
>10000 btu input to get 1 kw-hr output. or 10 MMBtu for a MW-hr so the
>value should be about 0.006 to 0.0075 lb/MMBtu input.

Tom
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Northeast Energy and Commerce Association

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Frederick M. Sellars

President

November 6, 2007

Ms. Sharon Rowe-Johnson
Connecticut Department of Environmental Protection
Bureau of Air Management
Engineering and Technical Services Division
79 Elm Street; 5th Floor
Hartford, CT 06106-5127

Subject: Proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

Dear Ms. Rowe-Johnson:

The Northeast Energy and Commerce Association ("NECA") appreciates this opportunity to provide input into the Connecticut Department of Environmental Protection's ("DEP") Public Notice dated October 9, 2007 requesting comments regarding the proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource.

NECA is New England's oldest and most broadly based, non-profit trade association serving the competitive electric power industry. NECA promotes environmentally sound, reliable, and cost-effective wholesale and retail markets for the production and delivery of electric power supply. NECA's diverse membership includes developers and owner/operators of competitive power projects, regulated and merchant transmission and distribution companies, power marketers and traders, fuel and equipment suppliers, power consumers, environmental consultants, and service providers to the power industry.

NECA is pleased to see that the DEP realizes the importance of having quick start units available to provide much needed electricity in Connecticut. As the DEP noted in its Conceptual Plan issued on August 3, 2007, quick start units are normally off, consuming no fuel and producing no emissions until needed. Therefore, to the extent that spinning reserves can be replaced by quick start generation, substantial emissions reductions and cost reductions will inevitably result. However, NECA is very concerned that many of the requirements proposed for the General Permit are much too rigorous. In 2004, NECA commented on the Proposed RCSA §22a-174-42 ("Chapter 42") Regulations for Distributed Generation. In those comments, NECA detailed that the emission limits being contemplated were much too low. Once again, the DEP is proposing emission limits that will be very difficult to meet.

NECA's detailed comments are as follows.

Applicability

It is understood that Public Act 07-242 limits participation to new or existing diesel-powered emergency generators and distributed generation resources capable of generating 2 megawatts ("MW") or less be allowed to operate under the General Permit. NECA does not understand why the Legislature chose a 2 MW limit since the Locational Forward Reserve Market ("LFRM") only allows nodes (typically sites but a site can have more than one node) greater than or equal to 5 MW to participate. Only facilities with multiple emergency engines or sites with large load requirements will be able to participate in this program. NECA believes there are few facilities in Connecticut that meet this 5-MW load requirement. NECA also understands that the Independent System Operator - New England ("ISO-New England") has no immediate plans to lower the 5-MW LFRM load requirement.

NECA is pleased that the DEP is proposing that engines located throughout Connecticut be allowed to operate under the General Permit since there are no geographical limits of the LFRM. Also, by allowing LFRM engines to be spread throughout the state, no one geographical area will bear all of the environmental burdens associated with this operation.

Emission Controls

The DEP is proposing air pollution control equipment for oxides of nitrogen ("NO_x") capable of achieving a $\geq$ 90 percent reduction (e.g., requires the use of selective catalytic reduction ["SCR"]). The DEP is also proposing particulate matter ("PM") controls to achieve up to a 85 percent reduction depending on the engine's proximity to sensitive receptors in conjunction with the use of ultra-low sulfur diesel ("ULSD") fuel. The DEP believes that the emission control equipment costs will range from $200,000 to $400,000 per engine.

The DEP has indicated that the Department of Public Utility Control ("DPUC") will make up to $10 million available for facilities to install emissions control equipment. It is uncertain at this time if the DPUC will pay for the full cost of controls or only a fraction of the costs. The DEP also believes that engines operating under the LFRM will receive up to $40,000 per month for a 2 MW engine. The DEP believes that the payback period for installing emission controls will be about 7.5 months.

NECA does not agree with the DEP's cost analysis. Although NECA agrees with the DEP's estimated capital costs for emissions controls,, these costs do not include installation and long-term operation. Installation costs, particularly in older facilities, could be quite significant since major changes to a building may be required to install the control equipment. This could easily double the estimated costs listed above. NECA also does not agree with the LFRM payments of up to $40,000 per month that the DEP estimates for a 2 MW engine. The LFRM market pays $14/kilowatt ("kW")-month or $28,000 per month for a 2 MW engine if the engine performs perfectly. Engines sized at 2 MW will have a net output much less than 2 MW. LFRM payments are based on load curtailed not unit size. A 2 MW engine normally operates at between 40 and 70 percent load. Also, there are performance penalties associated with the LFRM payment, so $14/kW-month is an upper limit and actual payments could be much lower. Accounting for net output and performance penalties, an engine sized at 2 MW may only receive $15,000 per month (or much less) in LFRM payments. If one uses an equipment control cost of $400,000 and another $400,000 for engineering/installation/building changes along with a monthly payment of $15,000, then the payback for the installation of the control equipment would be more than 53 months, much greater than the DEP estimate of 7.5 months.

NECA also questions the ability of diesel-fired engines to meet 90 percent emission reductions for both NO_x and PM. Caterpillar, in its comments to the DEP dated September 7, 2007 regarding the Conceptual Plan for the General Permit, states that the use of ULSD with an oxidation catalyst to reduce PM along with SCR to reduce NO_x can reduce PM emissions by up to 20 percent depending on the wet fraction of PM produced by unburned fuel and lubricating oil of the engine, and reduce NO_x emissions by 90 percent. These technologies reduce emissions by a percentage of the emissions output of the base engine. Further Caterpillar states that while diesel particulate filter ("DPF") technology can achieve higher PM reductions the following are constraints with implementation of a DPF and SCR combination at this time.

- There is currently insufficient testing with combinations of DPF and SCR systems in the emergency standby market to ensure engine and SCR system reliability and performance.

- DPFs combined with the other recommended technologies would add a significant amount of complexity (testing and installation logistics) to the evaluation process of the pilot program.
- The cost per ton of PM reduced for newer engine models, in emergency standby markets, operating nominally at < 0.20 g/bhp-hr, is extremely high. In other words, given about the same implementation and maintenance costs, a DPF will reduce more PM in a ≥ 0.20 g/bhp-hr engine.
- In addition to the upfront costs, DPFs require a significant amount of additional routine maintenance and ancillary equipment.
- Application guidelines must be followed including constraints on system backpressure, exhaust temperature, minimum engine load of 50 percent, and installation of monitoring equipment. Otherwise, the application is not a reasonable candidate for a DPF.
- Additionally, DPFs should not be applied in applications that would violate Environmental Protection Agency ("EPA") or California Air Resources Boad ("CARB") verification guidelines for the retrofit devices.

Thus, NECA recommends that the proposed PM controls in the draft General Permit be removed other than the requirement for the use of ULSD.

Definition of Emergency

The DEP removed subsection (E) from the definition of emergency because it believes an engine cannot be both a demand response and an LFRM resource. Currently under the ISO-New England rules, this is correct; an asset must be able to operate outside of Operating Procedure ("OP") 4 Action 12 to participate in the LFRM. However, it is uncertain what changes ISO-New England will make when it opens the LFRM up to demand response assets. Thus, NECA recommends that the DEP cover the contingency of ISO-New England changing its rules and be consistent with the definition of emergency in the proposed modifications to §22a-174-22. To avoid conflicting definitions in Connecticut regulations, NECA suggests that the following be added to the definition of "emergency" in Section 2 of the draft General Permit:

(E) Requires operation of the emergency engine under an agreement with the New England region system operator during the period of time the New England region system operator is implementing voltage reductions or involuntary load interruptions within the Connecticut load zone due to a capacity deficiency, known as Independent System Operator – New England, operating procedure number 4 action 12.

Expiration Date

The DEP is proposing an expiration date under which the General Permit shall expire on the later of December 31, 2010 or ninety days after the energizing of the Middletown-Norwalk 345 kilovolt ("kV") transmission line approved by the Connecticut Siting Council. It is unreasonable for the DEP to expect sources to install expensive control equipment with a payback that could exceed four years and have a facility permitted for this program for potentially only three years. It is understood that General Permits only last for five years; however, a mechanism needs to be put in place to ensure that the new investments are covered by the General Permit for a reasonable period.

Emissions Cap and Correction Program

NECA believes that the proposed emissions cap and correction program is unfair and targets only the registered sources under the General Permit. It is unclear why only engines participating in this program need to address the cap and correction program while other generators that contribute to the cap do not. A more equitable program needs to be implemented. Also, if a facility is enrolled in the ISO-NE Demand Response Program and is also curtailing its operations, then the curtailed emissions should be allowed to offset any emissions associated with LFRM operation.

Hours of Operation

NECA agrees that engines be allowed to operate up to 200 hours per rolling 12 months in the LFRM program and up to 300 hours for emergency/testing purposes. Also, operation of the engine for emergency/testing purposes should not count

towards a facility's daily NO_x Reasonable Available Control Technology ("RACT") limit of 137 or 274 lbs/day. Thus, an engine can be permitted as both a LFRM engine and an emergency engine.

Conclusions

Although NECA understands the DEP's concerns about the operation of diesel-fired generators, especially on High Electric Demand Days ("HEDD"), the DEP should weigh the overall benefit of having such generation available to operate in the LFRM. Even if the generators are never turned on, the net benefit in air quality in Connecticut could be substantial. The more LFRM generation that is available, the less spinning reserve unit operation will be required. As the DEP noted, many of the spinning reserve units are running in excess of 200 days per year, to be utilized only a few days per year. By decreasing the reliance on spinning reserve units, hundreds of tons of pollution per year could be eliminated.

The DEP should consider a phased-in approach in requiring controls to be installed on engines that wish to operate in the LFRM, based on the availability of DPUC funds to support such a program. We encourage the DEP to set more realistic emission control requirements; otherwise, it is very uncertain if any of these needed facilities will be sited using this General Permit.

Thank you in advance for your consideration of our comments.

Very truly yours,

Northeast Energy and Commerce Association

Frederick M. Sellars
President

[redacted]

BLUE SKY ENVIRONMENTAL LLC

November 7, 2007

Ms. Sharon Rowe-Johnson
Department of Environmental Protection
Bureau of Air Management
Engineering and Technical Services Division
79 Elm Street; 5th Floor
Hartford, CT 06106-5127

Subject: Proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

Dear Ms. Rowe-Johnson:

Blue Sky Environmental LLC ("Blue Sky") is pleased to provide these comments regarding the Connecticut Department of Environmental Protection's ("DEP") Public Notice issued on October 9, 2007 requesting comments regarding the proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource.

Blue Sky understands that Section 102 of PA 07-242 requires a limit of 2 megawatts ("MW") or less for diesel-fired emergency generators to operate under the General Permit. It is unclear why the Legislature selected a 2 MW limit since the rules of the Locational Forward Reserve Market ("LFRM") currently only allows nodes (typically sites, but a site can have more than one node) that are 5 MW or greater to participate in the program. The New England Independent System Operation ("ISO-NE") is currently operating a Pilot Program that allows engines smaller than 5 MW to participate. It is understood that a report on the Pilot Program is due on or about January 1, 2008. If the Pilot Program is found successful and if ISO-NE agrees to allow smaller engines to participate in the LFRM, it is understood that it could take about one year for ISO-NE to change the LFRM rules. Thus, it may not be until the winter of 2008 before engines less than 5 MW can participate in the LFRM.

The proposed General Permit allows engines to be able to operate as both emergency and LFRM engines which is good. Thus, operation of an engine during emergencies and for testing/maintenance should not count towards a facility's oxides of nitrogen ("NO_x") RACT limit of 137 or 274 lbs/day.

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Both 90% emission controls for NO_x and up to 85% controls for particulate matter ("PM") are not realistic. It is doubtful facilities will install expensive control equipment for a General Permit that could only be in place for a few years. It is also uncertain how much of the Department of Public Utility Control ("DPUC") funding will be available for individual projects. Installing expensive emission controls could have a payback of many years when one considers the costs of equipment, installation, structural changes, catalyst replacement, and other costs. Finally, engine manufacturers have pointed out to the DEP the constraints of having selective catalytic reduction ("SCR") for NO_x control and diesel particulate filters ("DPF") for PM control implemented at the same time. There are many problems associated with the operation of these two controls in tandem. Thus, Blue Sky recommends that the proposed PM controls in the draft General Permit be removed other than the requirement for the use of ULSD.

The DEP is proposing a definition of emergency in Section 2 of the draft General Permit that is inconsistent with its current and proposed definition of emergency in R.C.S.A. §22a-174-22. Blue Sky understands that the DEP removed subsection (E) from the current definition of emergency because it believes an engine cannot be both a demand response and an LFRM resource. Currently under the ISO-NE rules, this is correct. An asset must be able to operate outside of ISO-NE's Operating Procedure 4 ("OP 4") Action 12 to participate in the LFRM. However, it is uncertain what changes ISO-NE will make when it opens the LFRM to demand response assets. Thus, Blue Sky recommends that the DEP cover the contingency of ISO-NE changing its rules. Moreover, Blue Sky believes the definition of emergency should be consistent with the definition in the proposed modifications to R.C.S.A. §22a-174-22. To avoid conflicting definitions in the regulations, Blue Sky suggests that the following be added to the definition of emergency in Section 2 of the draft General Permit:

> (E) Requires operation of the emergency engine under an agreement with the New England region system operator during the period of time the New England region system operator is implementing voltage reductions or involuntary load interruptions within the Connecticut load zone due to a capacity deficiency, known as Independent System Operator – New England, operating procedure number 4 action 12.

Although the general permit will not affect engines currently operating in ISO-NE's Demand Response ("DR") Program under OP 4, Action 12, Blue Sky is very concerned that the DEP is considering emission controls to be installed. The DR Program is very rarely called and is an important Program that keeps the lights on in Connecticut. If the grid fails, every emergency engine in the state, whether they are permitted or not, will most likely be turned on for hours or days. The DEP needs to ensure that such a blackout never occurs. By requiring costly controls, the DEP will essentially eliminate the participation of most, if not all, of existing emergency engines currently in the DR Program.

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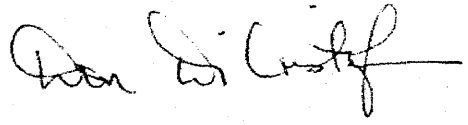
Blue Sky agrees that engines should be allowed to operate for up to 200 hours per running 12 months in the LFRM and up to 300 hours for emergency/testing purposes. Blue Sky also agrees that engines throughout Connecticut should be allowed to operate under the General Permit.

Thank you for providing Blue Sky an opportunity to comment on the Public Notice. Quick start units, such as emergency engines, are normally off, consuming no fuel and producing no emissions until needed. Thus, as spinning reserves are replaced by quick start generation, substantial emissions reductions and cost reductions will inevitably result. If the General Permit is properly written, without overly onerous conditions, the air quality in Connecticut could greatly improve by having a subset of emergency generators available, if needed, rather than continuously operating dirty, outdated power plants.

Sincerely,
Blue Sky Environmental LLC



Don C. DiCristofaro, CCM
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CLEAN WATER ACTION

645 Farmington Ave, 3rd Floor, Hartford, CT 06105 (860)232-6232

November 8th, 2007

To: Ms. Sharon Rowe-Johnson
Department of Environmental Protection, Bureau of Air Management, Engineering and Technical Services Division

Written Testimony Regarding The *Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource*

Clean Water Action is a non-profit environmental health organization representing over 11,000 Connecticut residents. We were a lead organization in the efforts to reduce emissions from the "Sooty Six" power plants and from the state's diesel school bus and transit bus fleets. We appreciate the opportunity to provide comment on the proposed general permit for emergency generators. Our primary concern is with health risks from the use of diesel generators and will focus our remarks on those units, and not on natural gas-powered distributed generation.

1. Particulate Matter Requirement not health protective

We agree with DEP's "Connecticut's Diesel Reduction Initiatives" webpage that characterizes diesel exhaust as an "important contributor to airborne concentrations of fine particle pollution, especially in urban areas," share DEP's stated concern over health impacts, especially to children and other vulnerable populations, and applaud that "Reducing diesel emissions is a DEP priority and we continue to move forward with a multi-faceted reduction strategy that includes mobile and stationary source applications[.]"

However, we are concerned that the draft permit as written runs counter to these goals. Paying diesel generators to run as peak-shaving units to possibly reduce the price of electricity on peak days is an optional application, and stands in sharp contrast with running diesel generators in brownout or other true emergency conditions.

Because of this fundamental difference, DEP can and should limit participation in the Locational Forward Reserve Market program to diesel generation units equipped with 85% effective pollution controls for particulate matter. Allowing diesel generators to run uncontrolled presents an unnecessary danger to public health.

As DEP is aware, parts of Connecticut are in non-attainment for particulate matter, and the current EPA standard is not health protective and is due to be tightened (if not to the levels recommended by EPA's Clean Air Scientific Advisory Committee.) With all that we know about the health effects of particulate matter it is important to limit the damage caused by diesel generators running in our communities on peak energy demand poor air quality days. We can keep from increasing ambient PM concentrations and the risk of acute local harm by requiring 85% effective controls for all diesel engines taking part in the program.

328/500 foot setback inadequate

Clean Water Action does not agree that the "sensitive receptors" definition adequately protects vulnerable populations. Diesel generators at government buildings, in parks, or in neighborhood businesses may be more than 500 feet from a school or another designated "sensitive receptor" but still close to vulnerable individuals living or working nearby. These individuals may include children, elderly, and those with impaired lung or cardiovascular function. As a general permit does not consider these type of local issues it should err on the side of protecting public health, and the best way to do this is to require 85% effective filters for all diesel generators running on high electricity demand days. It is unlikely that any unit close enough to electricity congested parts of the state to be asked to run are so far away from people to not pose any health problem whatsoever.

Secondly, given the widespread availability of effective pollution controls, we see no compelling policy reason to include 20% effective diesel oxidation catalysts at all- the only reason would be to reduce costs to generator owners who would profit greatly from participating in the LFRM program. There is a reason the legislature required 85% effective filters for school buses on the road the longest, and why DOT is not retrofitting transit buses with 20% effective devices but 85% effective devices. As with these other diesel engines, protecting potentially vulnerable members of the public from acute exposures to diesel exhaust should take priority.

2. Diesel Generators Should be Resource of Last Resort

Unlike energy efficiency and non-generation demand response, which should be resources of first resort as they save money and reduce pollution, diesel generators should be relied upon sparingly because of their poor emissions profiles compared to even the dirtiest centralized power plants.

DEP should tighten the general permit to reflect the undesirability of these units from an air planning and attainment perspective.

- DEP should not permit diesel generators outside of grid-congested southwestern CT so as not to unnecessarily burden other parts of the state with more pollution

- Businesses and institutions should have to document to the Commissioner in writing the steps they have taken to reduce their peak demand through energy efficiency and non-generation related demand response as part of their permit application. Generator applications lacking adequate documentation of load and peak load reductions (such as evidence of participation in CT Energy Efficiency Fund programs or ISO New England load-shedding programs) should be rejected as inconsistent with the following requirements of PA 07-242:

"(b) When issuing or renewing the general permit pursuant to this section, the Commissioner of Environmental Protection shall, in consultation with the chairperson of the Public Utilities Control Authority, consider energy generation that will maximize the savings to the state's electric ratepayers and benefit the state's economy as a whole, **but shall ensure that any emission increases resulting from the operation of sources covered by the general permit are offset by emission decreases from sources in Connecticut consistent with Connecticut's air quality attainment planning needs and requirements. The sources of decreases in emissions may include, but not be limited to, electric generation sources and demand response.** "

- Clean Water Action does not believe DEP can meet the statutory requirements of Sec 102(b) to ensure net zero emission increases from *in-state sources* without requiring some efficiency measures or demand response measures to be taken in order to run a diesel unit. Directionally-correct NOx offsets as part of a *regional* trading program do not constitute reductions from *Connecticut* sources. Energy efficiency and demand response can help back down intermediate/peaking power plants and potentially help keep Connecticut under the peak day caps, unlike diesel generators which may just trade pollution from one source for another and add to the overall pollution burden.

3. SW CT Diesel Generators are Greatest Ozone Concern

We are very concerned that the increased use of diesel generators in addition to the existing "Sooty Six" units will worsen Connecticut's ozone pollution problem. While 90% effective NOx controls will help, the diesel emissions rates are still greater than centralized power plants like New Haven or Bridgeport Harbor.

We are concerned that southwestern Connecticut suffers from some of the most severe ground-level ozone problems in the state (American Lung Association graded Fairfield as an F with 24 code orange ozone days and 8 code red days in 2006) and units allowed to run in New Haven and Fairfield Counties on days exceeding the daily cap should have to buy twice the NOx offsets as units in less polluted areas, roughly reflecting the relative severity of the ozone problems based on the ALA 2007 scorecard.

Sincerely,

Roger Smith
Campaign Director
Clean Water Action Connecticut

SEA
TOMORROW TODAY

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November 8, 2007

Delivered by e-mail

Department of Environmental Protection
Bureau of Air Management, Engineering and Technical Services Division
79 Elm Street, 5th Floor
Hartford, Connecticut 06106 -5127
Attn: Sharon Rowe-Johnson

Re: Comments on the Draft General Permit Regarding the Construction and Operation of New and Existing Emergency Engines and Distributed Generation Resources

Dear Mesdames and Sirs:

Sustainable Energy Analytics LLC ("SEA") respectfully submits these comments on the draft General Permit issued by the Department of Environmental Protection ("DEP") pursuant to the "Notice of Intent to Issue a General Permit – Notice of Public Hearing For a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource and to Revise the State Implementation Plan for Air Quality", dated October 3, 2007 and published October 9, 2007 (the "NOI").

SEA is a subsidiary of the Connecticut Municipal Electric Energy Cooperative ("CMEEC"). SEA was formed to participate in the Connecticut Energy Efficiency Partners Program, authorized by Public Act 07-242, section 94, and the pilot program created by Public Act 07-242, sections 102 and 103. SEA's business entails the provision of integrated services to customers combining electric demand and efficiency technologies with innovative supply solutions. SEA believes that environmentally upgrading diesel engines to supply electricity and avoiding emissions resulting from older spinning reserve and reliability must run ("RMR") units can benefit both electric customers in reducing costs and the environment in reducing emissions. SEA is currently preparing a diesel pilot application for submittal to the Department of Public Utility Control ("DPUC") for multiple types of diesel engines and the engineering necessary to retrofit the engines, pending the DPUC's action in docket 07-07-37, initiated in response to P.A. 07-242, section 103.

At the outset, SEA states its strong support for the DEP's action in developing the draft proposed General Permit. SEA believes that the General Permit is the cornerstone for facilitating additions to the State's capability for reducing air pollution emissions during peak electric demand periods. However, as currently written, SEA respectfully submits,

investment in retrofitting units with new hardware and equipment. A longer amortization time may also improve the market for retiring old units and replacing them with newer cleaner units fitted from the factory with nitrogen oxides ("NO_x") and particulate ("PM") removal. This would also remove warranty and maintenance uncertainty from the new units. The latter (new unit installation) cannot happen in time to meet the diesel pilot deadline but would be of significant value to Connecticut in reducing costs and emissions from spinning reserves and RMR units. In the longer term, these units in demand response mode will reduce the need for new generation. When the General Permit is renewed the emissions control equipment will still have to be operated and maintained.

In advocating a longer term for the General Permit than that currently proposed, SEA is mindful of the general limitations on General Permit term duration and the particular permit term limit set forth in the statute, P.A. 07-242, section 102(a), 3d sentence, which links the permit duration to the earlier of completion of Middletown-Norwalk 345 kV transmission project (the "Phase II" project) or the end of calendar year 2010. SEA points out, however, that the statute also appears to support an expectation of renewal of the General Permit for eligible projects in section 102(a), 4th sentence. SEA submits that the benefits from the facilities authorized under the Pilot Program will have continue beyond the period prior to completion of Phase II, since Phase II, when completed, primarily addresses in-State electric "congestion" costs. There is additional value to operation of the electric grid from the Pilot Program eligible facilities -- in reserve requirement support, economic cost reduction and second contingency or reliability support. Aggregated diesel generators can act like another unit on the grid with greater flexibility to tailor response to load. SEA urges the DEP to consider extending the term of the permit and/or, at a minimum, expressly referencing in the draft General Permit the expectation of renewal authorized by the statute – so as to provide potential participants in the pilot program a reasonably extended time horizon for regulatory stability to match the required period for recovery of the investment.

3. Proposed limits on operating hours

SEA proposes that the 12 month limit on maximum hours of operation when participating in the ISO-NE administered forward reserve market, in addition to the separate limit on operation in emergency mode, set forth in the General Permit be modified. SEA recommends instead that the limit be established to allow operation while participating in the ISO-NE administered markets for the greater of: (a) the existing minimum of two hundred hours over a rolling 12 month period; or (b) the number of hours for such period as determined by ISO-NE as the minimum period required to be eligible for participation in ISO-NE's program.

As a baseline for comparison, the current permit-by-rule (RCSA Section 22a-174-3b) allows a total of 300 hours per year of operation per emergency engine. As the DEP has recognized in the General Permit already, engines equipped with effective emission control devices, as otherwise required by the General Permit, should be allowed to operate for a significantly greater number of annual hours than engines lacking such control devices.

4. Proposed filing fees/costs

A purpose of the Pilot Program is to induce investment in improved emissions control devices for small generating facilities. Substantial permitting costs for small units are another barrier which will make it difficult or impossible to upgrade and then operate small units that have limited operational periods. The permit registration cost proposed in the General Permit are equivalent (assuming a 2 MW facility) to $ 2.50 per kW (plus the cost of retirement of two ozone season allowances, General Permit, section 4(c)(II)). The per- kW cost for registration is higher if the unit's capacity is smaller. A General Permit should obviate the need for extensive DEP administrative processing for eligible facilities. Accordingly, the registration fee should be reduced so that it is on the order of $1000 or less.

5. Proposed NOX and PM Control Requirements.

The public comment record is mixed from manufacturers and project developers about the feasibility of combined NO_x and PM control at the levels specified by the DEP in the General Permit. *Compare*, comments of Caterpillar (Sept. 7, 2007); comments of AT&T Services, Co. (Sept. 7, 2007); comments of Blue Sky Environmental LLC (Sept. 6, 2007), with comments of Johnson Matthey Inc. (Sept. 14, 2007). SEA acknowledges the flexibility, at least on the surface, afforded by the "tiered" levels of control reduction requirement allowed for existing engines depending on greater setbacks provided for under the current draft of the General Permit. However, SEA has found it difficult if not impossible to procure commercial warranties supporting the control devices which would match the level of controls required by the regulation for combined NO_x and PM reduction. Absent this commercial support, the General Permit control requirements may foreclose investment in emissions controls at all for many existing facilities – contrary to the presumed purpose of the pilot program. SEA urges the DEP to reconsider the control levels for PM reduction in light of the availability of "real" manufacturer support for ongoing operation of the facilities.

SEA also submits that an allowance for exceedances from the control limits be allowed for initial start-up of the engines.

6. Proposed Annual NOX Cap and Corrective Measure.

SEA is greatly concerned, in the first instance, about the equity of penalties imposed under the General Permit while other generating units (RMR units) are not subject to a similar regime. SEA would urge as an alternative, the imposition of a penalty regime for engines authorized under the General Permit only as part of an overall program addressing HEDD exceedances in which all stationary sources are included. *See, e.g.*, comments of NUSCO (dated Sept. 7, 2007).

At a minimum, SEA urges that the DEP reduce the high electric demand day ("HEDD") cap corrective action penalty from that proposed in the draft General Permit. SEA

believes that the amount ($5,000 minimum, rounded up to the nearest whole allowance cost for each day of cap exceedance, payable by each registrant) is excessive, particularly when viewed in the light of the evidence presumably utilized by the DEP in developing the General Permit. *See*, Exhibits 5 (Memorandum from Paul Miller, NESCAUM, Aug. 21, 2007) and 8 (Memorandum from Christopher James, DEP, dated Sept. 27, 2007), accompanying the DEP's technical submittal, dated November 2, 2007 in support of the draft permit. A lower penalty will better balance the competing policy considerations – mitigating emissions effects during HEDD against the uncertainty and risk for investors seeking to install emissions control devices resulting from an excessive penalty regime.

In DEP Exhibit 5, Mr. Miller of NESCAUM explains how a correction penalty can be calculated based upon current and projected prices for NO_x allowances and an individual unit's NO_x emissions during a HEDD exceedance. Ultimately, under Mr. Miller's suggested approach, each emergency engine would pay a different penalty that would be proportional to its NO_x emissions. In the example provided by Mr. Miller, using a variety of calculation techniques, the highest calculated penalty would be only $7,000 for the entire ozone season (assumes a 2 MW unit operates for 24 hours during HEDD exceedance events over the course of an ozone season). This should be compared with the per-day penalty sought by DEP in the draft General Permit.

In DEP Exhibit 8, Mr. James presents a scenario whereby he demonstrates (using appropriate ratios) that even the largest emergency engine operating under the General Permit would only have to purchase one CAIR allowance per HEDD exceedance event. Since CAIR allowances must be purchased in whole units, any emergency engine (regardless of its capacity or hours of operation) operating under the General Permit during a HEDD exceedance event must purchase one CAIR allowance. Mr. James represents that one CAIR allowance is approximately $2,000.

Section 6(a) of the draft General Permit describes the penalty that the DEP will impose as a result of a HEDD exceedance event. Specifically, Section 6(a)(2)(A)(i) states that each engine registered under the General Permit that operated on a HEDD exceedance event shall be required to permanently retire "a minimum of $5,000.00 of ozone season allowances from the CAIR NO_x Ozone Season Trading Program rounded up to the next allowance." The per-day assessment contemplated by the General Permit for a cap exceedance is wholly disproportionate to the postulated penalty for an entire ozone season calculated in DEP Exhibit 5. The rounding up mechanism further inflates the level of the penalty. Using Mr. James's assumption of a $2,000 cost for a CAIR allowance price, a payment of $5,000 would purchase 2.5 allowances. This would then have to be rounded up to a required purchase of 3 allowances resulting in a total payment of $6,000. Using a more extreme example, assuming a $4,500 CAIR allowance price, a payment of $5,000 would purchase 1.1 allowances. Rounding up to two allowances would require a payment of $9,000. It seems that the DEP has not followed the advice contained in either memorandum that it lists in its exhibits. Although all engine operators that operate an engine on a HEDD exceedance event will be required to pay the same amount of money, that amount will vary depending on the price for a CAIR allowance and will very likely require a payment greater than $5,000 per event.

7. Permissive Revocation of Individual NSR permits.

SEA strongly objects to the provision of Section 3(g) of the draft General Permit which states that the DEP may revoke an existing individual permit granted to an emergency engine that is authorized to operate under the terms of the General Permit. Since the draft General Permit, in the current version if not modified to reflect SEA's concerns discussed above, may be in effect for a relatively short period of time (perhaps only three years), the engine operator/owner may wish to operate under the terms of its individual permit subsequent to the termination of the General Permit. Revocation of the individual permit would allow the unit to operate only under permit by rule (Section 22a-174-3b) subsequent to the termination of the General Permit. Presumably the stability of the individual permit is of substantial importance to the operator/owner in supporting its investment in the permitted facility. Accordingly, DEP should remove this reference and/or should consider a "suspension" of the individual permit rather than a "revocation". Under this preferred formulation, the terms of the individual permit would revive, if still effective, upon the expiry of the General Permit.

We appreciate the opportunity afforded by the DEP to provide these written comments on the draft General Permit.

Very truly yours,

Marc W. Goldsmith

Mark G. Goldsmith
Interim CEO

November 8, 2007

Ms. Sharon Rowe-Johnson
Connecticut Department of Environmental Protection
Bureau of Air Management
Engineering and Technical Services Division
79 Elm Street; 5th Floor
Hartford, CT 06106-5127

RE: Proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

Dear Ms. Rowe-Johnson:

Waterside Power, LLC ("Waterside") has owned and operated a 69.2 megawatt ("MW") peaking power plant at 17 Amelia Place in Stamford since 2002. Recently Waterside was awarded a fifteen year contract with Connecticut Light and Power Company by the Connecticut Department of Public Utility Control ("DPUC") to operate as a peaking facility on a long-term basis. In addition to three quick-start turbines, the facility also includes a blackstart generator. The three turbines are permitted under individual New Source Review "(NSR") air permits and the entire site operates under a Title V Operating Permit.

Waterside is pleased to see that the Department of Environmental Protection ("DEP") realizes the importance of having quick start units available to increase the reliability and efficiency of the bulk power supply system in Connecticut. As the DEP indicates in its Public Notice, quick start units are normally off, consuming no fuel and producing no emissions until needed. Therefore, to the extent that spinning reserves can be replaced by quick start generation, substantial emissions reductions and cost reductions will inevitably result.

Waterside's comments regarding the proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource follow:

Applicability

Waterside is pleased that the DEP is limiting eligibility of the General Permit to only engines that have received approval from the DPUC to participate in the pilot program pursuant to subsection (b) of section 103 of Public Act 07-242. Thus, engines not participating in the DPUC program can obtain individual New Source Review ("NSR") permits under RCSA §22a-174-3a.

Definition of Emergency

The DEP is proposing a definition of emergency in Section 2 of the draft General Permit that is inconsistent with its current and proposed definition of emergency in R.C.S.A. §22a-174-22. Waterside understands that the DEP removed subsection (E) from the current definition of emergency because it believes an engine cannot be both a demand response program resource and an LFRM resource. Currently under the ISO-New England ("ISO-NE") rules, this is correct. An asset must be able to operate outside of ISO-NE's Operating Procedure 4 ("OP 4") Action 12 to participate in the Locational Forward Reserve Market ("LFRM"). However, it is uncertain what changes ISO-NE will make when it opens the LFRM to demand response assets. Thus, Waterside recommends that the DEP cover the contingency of ISO-NE changing its rules. Moreover, Waterside believes the definition of emergency should be consistent with the definition in the proposed modifications to R.C.S.A. §22a-174-22. To avoid conflicting definitions in the regulations, Waterside suggests that the following be added to the definition of emergency in Section 2 of the draft General Permit:

(E) Requires operation of the emergency engine under an agreement with the New England region system operator during the period of time the New England region system operator is implementing voltage reductions or involuntary load interruptions within the Connecticut load zone due to a capacity deficiency, known as Independent System Operator – New England, operating procedure number 4 action 12.

Expiration Date

The DEP is contemplating an expiration date under which the General Permit shall expire on the later of December 31, 2010 or upon a determination by ISO-NE that the Middletown-Norwalk 345kV transmission line has commenced reliable service. It is unreasonable for the DEP to expect sources to install expensive control equipment with a payback that could exceed four years and have a facility permitted for this program for potentially only three years. It is understood that General Permits only last for five years; however, a mechanism needs to be put in place allowing the General Permit to be automatically renewed.

Hours of Operation

Waterside agrees with the DEP's proposed hour limits of 200 hours for LFRM operation and 300 hours for emergency operation. Waterside applauds the DEP for allowing an engine to be both a LFRM and emergency engine. Also, operation of the engine for emergency/testing purposes should not count towards a facility's daily NO_x RACT limit of 137 or 274 lbs/day. Thus, an engine can be permitted as both a dispatchable engine and an emergency engine.

Emission Controls

The DEP is proposing air pollution control equipment for NO_x capable of achieving a $\geq$ 90% reduction (e.g., requires the use of selective catalytic reduction ("SCR")). The DEP is also proposing particulate matter ("PM") controls (e.g., diesel particulate filter ("DPF") to achieve up to 85% reductions in conjunction with the use of ultra-low sulfur diesel fuel. The DEP believes that the emission control equipment costs will range from $200,000 to $400,000 per engine and that the payback period will be about 7.5 months.

Waterside does not agree with the DEP's cost analysis. Although Waterside agrees with the DEP's estimated equipment control costs, these costs do not include installation and long-term operation. Installation costs, particularly in older facilities, could be quite significant since major changes to a building may be required to install the control equipment. This could easily double the estimated costs listed above. Currently, the most lucrative market offered by the regional system operator is the LFRM which pays $14/kW-month or $28,000 per month for a 2,000 kW engine. Of course, this estimated revenue can only be achieved if the engine performs with 100 percent availability. Furthermore, since many engines will operate to curtail load as opposed to export power to the grid, engines sized at 2,000 kW will have a net output much less than 2,000 kW. A 2,000 kW engine normally operates at between 40 and 70% load. Also, there are performance penalties associated with the LFRM payment, so $14/kW-month is an upper limit and actual payments could be quite lower. Accounting for net output and performance penalties, an engine sized at 2,000 kW may only receive $15,000 per month (or much less) in LFRM payments. If one uses an equipment control cost of $400,000 and another $400,000 for engineering/ installation/building changes along with a monthly payment of $15,000, then the payback for the installation of the control equipment would be more than 53 months, much greater than the DEP estimate of 7.5 months.

Waterside is concerned that requiring engines to install both SCR and DPF combined will be severely constraining. Others have commented to the DEP that there has not been enough testing with combinations of DPF and SCR in emergency standby markets to ensure engine and SCR system reliability and performance.

OP 4, Action 12 Engines

Waterside understands that the proposed General Permit will not affect engines currently operating in the regional system operator's Real Time Demand Response Program under OP 4, Action 12 conditions. OP 4, Action 12 is the start of brownouts with the next step being involuntary interruptions of load. This declaration is taken very seriously by the regional system operator. In fact, even under the extreme weather conditions which occurred during the summer of 2002, the ISO did not declare OP 4, Action 12. Over the past 5 years, OP 4 Action 12 has only been declared in Connecticut on August 15, 2003, in response to the major power failure that occurred throughout the Northeast, on July 27, 2005 and August 2, 2006 when record demands for electricity were set. OP 4 Action 12 is truly reserved for emergency situations. However, Waterside is concerned that the DEP is contemplating controls for engines that are currently operating in this demand response program based on certain portions of the Public Notice regarding the Conceptual Plan issued in August.

Since 2002, under the Real Time Demand Response Program, the regional system operator has acted to ensure the continued reliability of power supply in Connecticut, particularly in the southwest portion of the state. Without this reliability, Connecticut's economy and business climate will severely suffer. The Connecticut Energy Advisory Board ("CEAB") in its April 2006 Report indicates that "demand response programs, particularly those that can qualify for operating reserve, have an opportunity to play an important role in meeting the capacity requirements identified." The Connecticut Siting Council's Review of the Ten-Year Forecast of Connecticut Electric Loads and Resources 2005-2014 noted that emergency generators and DR programs were critical elements to address capacity shortfalls in southwest Connecticut.

Waterside is quite certain that if the DEP were to require controls on engines participating in this demand response program, then most of these engines would drop out of the program. Waterside

urges the DEP not to change the rules for the existing demand response program – a program that is rarely called but is so vital to ensuring that the lights stay on in Connecticut.

Conclusions

Although Waterside understands the DEP's concerns about the operation of diesel-fired generators, especially on High Electric Demand Days ("HEDD"), the DEP should weigh the overall benefit of having such generation available to operate in the regional electricity markets. Even if the generators are never turned on, the net benefit in air quality in Connecticut could be substantial. The more quick start generation that is available, the less spinning reserve unit operation will be required. As the DEP noted, many of the spinning reserve units are running in excess of 200 days per year, yet are only needed for system reliability a few days per year. By decreasing the reliance on spinning reserve units, hundreds of tons of pollution per year will be eliminated.

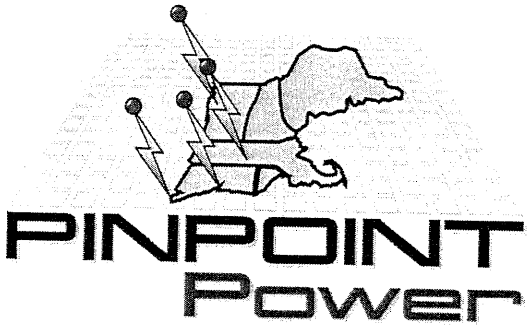
The DEP should set realistic emission control requirements; otherwise, no facility will be sited using this General Permit.

Thank you for your consideration of our comments.

Sincerely yours,

Thomas E. Atkins
Director

Cc: DEP Office of Adjudications



November 8, 2007

Ms. Sharon Rowe-Johnson
Connecticut Department of Environmental Protection
Bureau of Air Management
Engineering and Technical Services Division
79 Elm Street; 5th Floor
Hartford, CT 06106-5127

RE: Proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

Dear Ms. Rowe-Johnson:

Pinpoint Power, LLC ("Pinpoint") is pleased to provide these comments regarding the Department of Environmental Protection's ("DEP") public notice issued on October 9, 2007 requesting comments regarding the proposed General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource.

- Pinpoint is pleased that the DEP is restricting the proposed General Permit to only those engines that will be participating in the Department of Public Utility Control's ("DPUC") pilot program in accordance with subsection (b) of section 103 of Public Act 07-242. All other engines can obtain individual New Source Review ("NSR") permits as per R.C.S.A. §22a-174-3a.

- Pinpoint is pleased that the DEP will allow engines to operate as both emergency engines and LFRM engines. Thus, operation of an engine during emergencies and for testing/maintenance will not count toward a facility's oxides of nitrogen ("NO_x") RACT limit of 137 or 274 lbs/day.

- Pinpoint agrees that engines should be allowed to operate up to 200 hours per rolling 12 months in the LFRM and 300 hours for emergency/testing purposes.

- Pinpoint agrees that engines throughout Connecticut should be allowed to operate under the general permit.

105 Chestnut Street; Suite 37
Needham, MA 02492
Ph: 781-453-1145
Fax: 781-453-1142

- 90% emission controls for both NO_x and up to 85% emission controls for particulate matter ("PM") are not realistic; will be extremely costly and have not been proven to work simultaneously.

- The DEP should use a definition of emergency that is consistent with current and proposed regulations. Although under current ISO-NE rules, an engine cannot be both a demand response and LFRM asset, the DEP should plan for a possible change to this rule once the LFRM is opened to demand response assets. In addition, it is not recommended that the DEP have different definitions of emergency in different regulations/General Permits. Thus, it is recommended that the following be added to the definition of emergency in section 2 of the draft General Permit:

  (E) Requires operation of the emergency engine under an agreement with the New England region system operator during the period of time the New England region system operator is implementing voltage reductions or involuntary load interruptions within the Connecticut load zone due to a capacity deficiency, known as Independent System Operator – New England, operating procedure number 4 action 12.

- Although the general permit will not affect engines currently operating in the ISO Demand Response Program under OP 4, Action 12, Pinpoint is very concerned that the DEP is contemplating further regulatory action that could require the installation and operation of selective catalytic reduction ("SCR") or other control technology. The DEP will essentially eliminate the participation of the vast majority of existing emergency engines in the DR Program if it requires emission controls. The DR Program is very rarely called and has proven to be a valuable asset to keeping the lights on in Connecticut.

Pinpoint wishes to thank the DEP for allowing it to comment on the proposed general permit.

Sincerely,

Thomas E. Atkins
President

Cc: DEP Office of Adjudications

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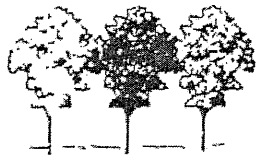

Connecticut Fund
for the Environment

November 8, 2007

Ms. Sharon Rowe-Johnson
Department of Environmental Protection
Bureau of Air Management
Planning and Standards Division
79 Elm Street
Hartford, Connecticut 06106-5127

Re: Comments of CONNECTICUT FUND FOR THE ENVIRONMENT on Notice of Intent to Issue a General Permit to Construct and/or Operate New or Existing Emergency Engine or Distributed Generation Resource

Connecticut Fund for the Environment (CFE") is a statewide multi-issue environmental organization using law, science and public education to defend and improve the air land and water in and around Connecticut and the Long Island Sound. CFE represents over 6,000 members from 4,800 households and submits these comments on their behalf.

Connecticut Fund for the Environment ("CFE") hereby submits these comments on the Notice of Intent to Issue a General Permit to Construct and/or Operate New or Existing Emergency Engine or Distributed Generation Resource issued by the Department of Environmental Protection ("DEP") on October 9, 2007. CFE has also submitted comments in response to the Request for Information to Develop the General Permit issued by DEP on August 3, 2007. Those comments are a part of this administrative record and are incorporated by reference into these comments. CFE has also intervened as a party in these General Permit proceedings and will present expert testimony from a noted toxicologist and air modeler regarding the health impacts that would result from implementation of the General Permit. CFE's Notice of Intervention is a part of the administrative record and is also incorporated by reference into these public comments.

In essence, CFE has serious concerns that the General Permit will not be protective of public health and air quality in Connecticut. The DEP and the legislature have recently invested substantial resources into addressing the well known dangers from toxic diesel fumes to those suffering from lung and heart disease and cancer. Yet this general permit will allow such sources, which DEP has pointed out are dirtier than old polluting power plants, within residential areas and proximate to places such as hospitals, nursing homes and daycare centers ("Sensitive Receptors"). A generator could be placed in a residential area with NO advanced controls for toxic diesel particulate matter ("PM"). Moreover, if controls are utilized, there is no setback required even from Sensitive Receptors. We believe DEP should require pollution controls that would reduce PM by at least 85% for all registered generators and believe that there should be appropriate setbacks from the general population and from sensitive receptors.

The General Permit also fails to meet the legislative mandate not to increase pollution in Connecticut and fails to meet DEP's obligations under the Clean Air Act to reduce ozone forming nitrogen oxide ("NOx) emissions on peak energy days. Section 102(a) of Public Act 07-242 requires that "any emission increases resulting from the operation of sources covered by the [G]eneral [P]ermit are offset by emission decreases from sources in Connecticut" (Emphasis added). Yet the only offset requirements apply to NOx. There are no offsets for PM, sulfur or other pollutants. Even with respect to NOx, the offsets are not Connecticut specific and are not appropriately directed.

In its preliminary Request for Information on the General Permit, DEP noted that it is required by interstate agreements entered into pursuant to the Clean Air Act, to reduce NOx emissions on High Energy Demand Days ("HEDD"). This is because these days correspond to the hottest days when air quality is most hazardous to sensitive populations and to others. While the permit allows registered sources to emit pollutants on these days, the offsets that are required are not tied to HEDDs. Thus, the General Permit will actually end up increasing, rather than reducing, HEDD emissions. Moreover, these emission increases will tend to be in urban, environmentally overburdened areas and will therefore disproportionately impact low income and minority populations on the worst days when air quality is already drastically unhealthy.

For all the reasons set forth above, in our earlier comments and in our legal intervention, Connecticut Fund for the Environment urges DEP to revise the permit so it is protective of the public health and in compliance with state and federal law.

Sincerely,

Roger Reynolds
Senior Staff Attorney
Connecticut Fund for the Environment
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rreynolds@cfenv.org

CONNECTICUT
MUNICIPAL ELECTRIC
ENERGY COOPERATIVE

30 Stott Avenue
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860-889-4088 Fax 860-889-8158

November 8, 2007

Delivered by e-mail

Department of Environmental Protection
Bureau of Air Management, Engineering and Technical Services Division
79 Elm Street
Hartford, Connecticut 06106 -5127
Attn: Sharon Rowe-Johnson

Re: Comments on the Draft General Permit Regarding the Construction and Operation of New and Existing Emergency Engines and Distributed Generation Resources

Dear Mesdames and Sirs:

The Connecticut Municipal Electric Energy Cooperative ("CMEEC") files this letter with the Department indicating its support of the written comments of Sustainable Energy Analytics LLC ("SEA") also submitted in this proceeding, by letter dated November 8, 2007.

Should you have any questions do not hesitate to contact the undersigned.

Very truly yours,

Maurice R. Scully
Executive Director

Environment and Human Health, Inc.
1191 Ridge Road
North Haven, Connecticut 06473
Phone (203)248-6582 **Fax (203)288-7571**

Jean F. Dellamargio, Hearing Officer
CT Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

November 9, 2007

Hearing concerning the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource.

Environment and Human Health, Inc. (EHHI) is very concerned about the permitting of individual diesel generators as a distributed generation source because of the potential harm to human health.

EHHI is a Connecticut ten-member non-profit organization made up of physicians and public health professionals who are dedicated to protecting the public's health from environmental harms. EHHI has worked extensively on diesel issues - publishing two research reports on the effects of diesel exhaust on human health. Both *Children's exposures to Diesel Exhaust from their School Busses* and *The Harmful Effects of Vehicle Exhaust* lay out the health issues of diesel exposures.

Both studies show that the components of diesel exhaust are carcinogenic as well as being extremely harmful to asthmatics and other vulnerable populations. EHHI has documented in another research study, *A survey of Asthma Prevalence in Elementary School Children,* that one out of ten grammar school children in Connecticut have asthma. As well, according to the CT Department of Health's website, 216,000 people in Connecticut have asthma. Diesel exhaust's particulate matter also increases the risk for hospitalizations for those with cardio-vascular disease.

The state of Connecticut is geographically a small state, yet it has a very large vulnerable population that includes those with diabetes, cancer, chronic obstructive pulmonary disease,

asthma, heart disease, the very young and the very old. Introducing another diesel source of exposures into this state seems extremely unwise.

The California Air Resources Board, whose standards the CT DEP has used for determining their proposed set backs, has also concluded that diesel emissions account for the majority of cancer risks created by all outdoor pollution air sources in their state.

If one looks at the EPA's map of the United States showing carcinogenic air pollution you will see that the most polluted geographic areas in New England are along the transportation routes from Boston to Washington, D.C. Those affected states, including Connecticut, have very high cancer rates when compared to other states around the nation. In other words, Connecticut is already carrying a very heavy burden of toxic air pollution, and hardly needs to add another source of diesel exhaust.

How is the CT DEP going to protect Connecticut's people with these proposed regulations? The vulnerable populations of this state are not just in schools, hospitals, and nursing homes. Instead, they are children and adults living in their homes in residential areas all over our state. How will these people be protected? The proposed General Permit Regulations do not include minimum or adequate setbacks for residential zones and therefore will not give adequate protection to these people. As well, the proposed regulations do not provide adequate pollution controls to be protective of Connecticut citizens' health.

Although many regulations are statewide - that is not how we all are actually exposed. The concept of "Caps and Offsets" is important for the health of the globe - but does not protect local populations. If you are following a diesel truck for a long while - although that one truck may not be a great harm to the state or the planet - it might be a great harm to the people following that truck - especially if they are asthmatic, have heart disease, or chronic obstructive pulmonary disease. That is what we mean by local exposures that can be so dangerous.

If CT DEP's only means of protecting people is by setbacks and pollution controls - then the proposed CT DEP setbacks and pollution controls proposed are not nearly strong enough. The CT DEP must remember that exposures are local - that individuals who are not appropriately protected will be unfairly treated by the state - and we cannot allow that to happen. Local exposures can be extremely serious, life threatening and precipitated by very short exposures - as little as one to two hours.

The CT DEP proposes to only require pollution controls if a generator is less than 500 feet from a school, hospital or other sensitive sites and only demands 85% pollution controls on a generator if it is less than 328 feet from the closest sensitive receptor. That is just not good enough. **The CT DEP must recommend 85% pollution controls for ALL generators, no matter where they are located, if citizens are to be protected. Vulnerable populations should be protected by a 1,000-foot setback - not 500 feet. All individual diesel generators must have pollution controls and use the least polluting fuel available. Natural gas should be encouraged.**

The fact that the permitted generators would tend to operate on "High Energy Demand Days," which means they could operate on unhealthiest air-days of the year, will result in further adverse impacts to the quality of air and human health. The state must consider, when creating these regulations, Connecticut's background of air pollution. Connecticut is already suffering from diesel pollution from mid-western power plants as well as from excessive truck and vehicle traffic that moves through our state. The people of Connecticut are already carrying very high burdens of air pollution. The background levels of air pollution in this state are one more reason why these proposed regulations are simply not protective enough.

It is therefore important that CT DEP regulations establish that: (1) all permitted generators have pollution controls installed that will cut emissions by up to 85%, (2) that all permitted generators use the least polluting fuel source available, (3) that the setbacks are more stringent than those being presently proposed, and (4) that each permitted generator be subject to a "site-specific" assessment that considers all appropriate health protection criteria for each particular generator. All four things are absolutely necessary if we are to protect human health in this state.

Thank you,

Nancy Alderman, President
Environment and Human Health, Inc.

Elizabeth Beiter Oldfield, 46 Maple Street, Milford CT 06460 November 9th, 2007

Written Testimony Regarding The Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource

I'm writing today as a private citizen and mother who is concerned about how air quality, or lack thereof, affects the health of Connecticut citizens, especially children. I am concerned about how the pollutants from diesel generators can contribute to poor air quality if they are being run during times that are not true emergencies and if the best pollution controls are not required at all times and all locations.

For a number of years, I have been taking notice of research regarding how air quality and asthma may be linked. In my hometown of Buffalo, New York, studies show that there are higher instances of asthma in children who live closest to the Peace Bridge, where many thousands of commercial trucks idle each year as they await Customs clearance. When I lived in the Atlanta area, which suffers from much traffic congestion, children's allergies and asthma were so common and on the increase that signs of their onset in young patients were a part of a routine well-child exam at my child's pediatric practice.

Now I live in Southwestern Connecticut, where the air quality is well into "unacceptable" levels" I continue to be aware of the issue of poor air quality and health problems, especially asthma. Very recently I brought my child to a pediatric appointment and I found information in the medical office that greatly interested me. The first was the publication *Healthy Children Allergy/Asthma 2007* published by the American Academy of Pediatrics. A few items in this publication particularly stood out to me. The first was a fact regarding children and air quality, which reads, "In 2005, 60 percent of children lived in counties in which one or more air pollutants rose above allowable levels. It's a significant increase from 46 percent in 2004." ("The State of Our Children", page 4). Other items were "Asthma is the third leading cause of hospitalization among children under the age of 15." and "Over 9 million U.S. children under 18 years of age (13 percent) have been diagnosed with asthma, and 6.5 million children (9 percent) currently have asthma." (Asthma Fast Facts, page 10). I also noticed a posted call for children suffering from asthma and wheezing to participate in a research study regarding the link between those health issues and air quality. I could not help concluding that the state of our children's lung health is a major concern at this time.

The DEP's efforts at pollution controls must be commended, but my concern is that the guidelines in the draft permit aren't strong enough to protect our overall air quality and certainly not compromised citizens, whether they are part of a "sensitive receptor" group or simply an individual living either less than or greater to 500 feet from a running generator. Consider a worst-case example of a single child with asthma (not considered a "sensitive receptor") living near a diesel generator that is running with no pollution controls at all. If the generator is being used to aid a power surge during peak hours rather than a true emergency, for example during a hot summer day, the emitted pollutants are greatly contributing to already very poor air quality. Even a compromised person or "sensitive receptors" living outside the 500 feet range of the generator, where no pollution controls are required at all, are not adequately protected. Have you ever thrown up a handful of leaves on a windy day? You can watch one or more of those leaves be carried at least 500 feet. Therefore it is logical to assume that the fine particulates in diesel exhaust could travel further than 500 feet and negatively affect a person who already suffers from compromised lung health.

Since the Connecticut Department of Environmental Protection so carefully creates programs such as No Child Left Inside to encourage children to spend time outside, it only makes sense that this agency also ensures the best possible air quality. The strictest pollution controls coupled with enforced efforts for businesses to reduce their energy use rather than relying on diesel generators would be most beneficial solution in ensuring our overall air quality and health. As money is always an issue, I will address this by saying that money spent on stricter pollution controls will most certainly be matched or be exceeded by the dollars spent on expensive asthma treatments, hospitalizations, doctor's appointments, pharmaceuticals, etc. by the millions of people who suffer from medical problems caused or triggered by diesel pollutants.

November 8, 2007

CATERPILLAR®

Northeast District Office
175 Power Forest Drive
Weatogue, CT 06089-9658

Department of Environmental Protection
Bureau of Air Management / Planning and Standards Division
79 Elm Street
Hartford, CT 06106-5127

Attn: Rick Rodrigue

Please accept the following response to the request by the Department of Environmental Protection for comments on the general permit regarding the construction and operation of new or existing diesel powered emergency engines for purposes of participation in a pilot program developed by the Department of Public Utility Control (DPUC) specified in section 103 of Public Act (PA) 07-242, An Act Concerning Electricity and Energy Efficiency.

After review of the updated permit, we offer the following requests:

1. Under Section 3. a. (1) The Maximum rating of the MWs of the generator needs to be 3.0 MW
2. Under Section 3. e. The expiration date of the permit on Dec. 31, 2010 does not allow for sufficient payback of the equipment. Given the costs associated with implementing these emissions solutions we recommend a minimum four year general permit expiration date for applications employing SCR, and a seven year expiration date for applications employing a combination of SCR and DPF.
3. Under Section 5. a. (1). We suggest changing to the following language: "The generator shall not emit more than 1.7 lbs/MW-hr of NOx or must achieve 90% reduction of the engine out NOx emissions"
4. Under Section 5 a. (2)
   We believe that our original proposal for both new and existing engines remains the most logical for this permit. Please reference the attached September 7, 2007 submittal to Department of Environmental Protection Bureau of Air Management. Another reasonable option for new engines would be to limit PM to no more than 0.225 lbs/MW-hr (Tier 2 + ULSD + Oxicat).
5. Under Section 5 a. (14) Opacity numbers cannot be reached as is: We suggest the following.
   a. Need to be less than 20% opacity for an average of 5 minutes
   b. With the exception of transient load changes greater than 10% instantaneous load increases, the generator will not exceed 40% opacity.

Thank you for your consideration,

Reference: September 7, 2007 submittal to Department of Environmental Protection Bureau of Air Management

Jeff Jacobs
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CATERPILLAR®

Northeast District Office
175 Powder Forest Drive
Weatogue, CT 06089-9658

September 7, 2007

Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, CT 06106-5127

Attn: Richard Pirolli
cc: Patricia Downes - DEP
Mike Thibault – HO Penn Power Systems
Steve Igoe – Caterpillar Emissions Solutions Commercial Manager
TJ Tarabulski – Caterpillar Emissions Solutions Engineering Team Leader
Brady Winkleman - Caterpillar Engine Emission Regulations

Please accept the following response to the request by the Department of Environmental Protection for comments on the general permit regarding the construction and operation of new or existing diesel powered emergency engines for purposes of participation in a pilot program developed by the Department of Public Utility Control (DPUC) specified in section 103 of Public Act (PA) 07-242, An Act Concerning Electricity and Energy Efficiency. A team of Caterpillar Inc. emissions solutions engineers and consultants as well as representatives from the local Caterpillar dealership in Connecticut, H.O. Penn, reviewed the general permit outline focusing on issues related to the reliability of engine and retrofit systems, cost effectiveness, and market readiness.

Particulate Matter (PM) Controls

For the proposed timeframe of this pilot program the best technologies for PM reductions include Ultra Low Sulfur Diesel (ULSD - 15 ppm sulfur) and an oxidation catalyst. Together these technologies along with selective catalytic reduction (SCR) can reduce PM by up to 20%, depending on the wet fraction of PM produced by unburned fuel and lubricating oil of the engine, and reduce NOx by 90%, respectively.

These technologies reduce emissions by a percentage of the emissions output of the base engine. Therefore, the overall emissions output of the system, including the engine, fuels, and aftertreatment, will be dependant on base engine emissions output. As an example of potential emissions impacts, a Tier 2 certified Caterpillar D3516C 2 Mw package could achieve the posted EPA Tier 4a certification limits for NOx and PM (2011 mandate) using ULSD fuel, a SCR system, and an oxidation catalyst.

Earlier base engine designs can produce higher levels of emissions, and will not necessarily meet Tier 4a limits with the application of the proposed technologies, but will be able to achieve approximately the same emissions reduction percentages and have a significant impact on the overall emissions reduction efforts due to the large number of these units in service.

While diesel particulate filter (DPF) technology can achieve higher PM reductions the following are constraints with implementation of a DPF and SCR combination at this time.

- ✓ There has not been enough testing with combinations of DPF and selective catalytic reduction (SCR) systems in the emergency standby market to ensure engine and SCR system reliability and performance.
- ✓ DPFs combined with the other recommended technologies would add a significant amount of complexity (testing and installation logistics) to the evaluation process of the pilot program.
- ✓ The cost per ton of PM reduced for newer engine models, in emergency standby markets, operating nominally at <0.20 g/bhp-hr is extremely high. In other words, given about the same implementation and maintenance costs, a DPF will reduce more PM in a >=0.20 g/bhp-hr engine.
- ✓ In addition to the upfront costs DPFs require a significant amount of additional routine maintenance and ancillary equipment.
- ✓ Application guidelines must be followed including constraints on system backpressure, exhaust temperature, minimum engine load of 50%, and installation of monitoring equipment. Otherwise, the application is not a reasonable candidate for a DPF.
- ✓ Additionally, DPFs should not be applied in applications that would violate EPA or CARB verification guidelines for the retrofit device.

General Permit Expiration Date

Given the costs associated with implementing these emissions solutions we recommend a minimum four year general permit expiration date for applications employing SCR, and a seven year expiration date for applications employing a combination of SCR and DPF.

Methodologies to Determine Baseline Peak Day Emissions

Use ISO8528 D2 cycle weighted emissions for emergency and distributed generation and full load data for base loaded emissions.

Biodiesel

Biodiesel can reduce various amounts of PM, HC, and CO emissions depending on the percent of biodiesel that is used, however there is limited experience with integrating biodiesel fuel in diesel engine standby applications with aftertreatment. Further, biodiesel does not generally exhibit long term fuel blend stability as is typically required in standby applications. Due to the variability of blend qualities and corresponding limited testing with engines and emissions reduction systems, the following are recommendations for use of Biodiesel. For large engines built in 2006 and earlier, it is recommended that the biodiesel blend not exceed 30% (B30 = 30% Biodiesel + 70% petroleum diesel). Additionally, the following requirements should be met.

- ✓ Final biodiesel blend must meet requirements for distillate diesel fuel published by Caterpillar, ASTM D975, or EN590
- ✓ Biodiesel blend stock must meet requirements listed in the Caterpillar biodiesel specification, ASTM D6751, or EN 14214
- ✓ Distillate diesel used for blending must meet Caterpillar requirements, ASTM D975, or EN590
- ✓ The producer should be BQ-9000 accredited.

The Caterpillar engine and parts warranty covers material and workmanship defects of the products sold by Caterpillar. Failures caused by other factors, including lack of proper maintenance (use of improper fuel, oil or filters, lubricants and coolant) are not covered by warranty.

The performance of biodiesel should be evaluated based on its ability to reduce emissions without negatively affecting the performance of the engine system or aftertreatment device.

Summary

Engines running on ULSD fuel, and using a SCR system and oxidation catalyst, can achieve up to 20% PM, 90% NOx, and significant HC and CO emissions reductions. Biodiesel can further reduce PM, HC, and CO assuming the compatibility is validated with the aftertreatment devices. The proper application of these technologies can significantly reduce emissions output and improve general acceptance in the marketplace. DPF integration with a SCR is technically feasible. Combined DPF and SCR implementation is best applied to specific applications, where the nominal engine output >=0.20 g/bhp-hr for particulate matter. In these applications, the greatest impact on aggregate emissions should result, ensuring successful participation and cost effective implementation of this program.

Thank you for your consideration,

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11/8/2007

Ms. Sharon Rowe-Johnson
Department of Environmental Protection
Bureau of Air Management
Planning and Standards Division
79 Elm Street
Hartford, CT 06106

Written Testimony Regarding the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource

Environment Connecticut is a member-supported statewide nonprofit, nonpartisan environmental advocacy organization. We submit these comments on the general permit, and our concern that it fails to protect the public health and would undermine efforts to improve Connecticut's air quality.

The general permit allows polluting diesel generators to be located and operated in close proximity to residential communities, medical facilities and childcare centers. The general permit would allow these generators to operate without advanced controls for particulate matter (PM). Although there are setback requirements for Sensitive Receptors, these fail to be adequately protective of the public health and there is no setback requirement if controls are utilized.

DEP should require all generators registered under the general permit to utilize pollution controls that are at least 85% effective at reducing PM. DEP should also require appropriate, protective setbacks from the local population as well as from Sensitive Receptors.

The general permit does not comply with the language of PA 07-242. Section 102(a) of that act states that *"any emission increases resulting from the operation of sources covered by the general permit are offset by emission decreases from sources in Connecticut consistent with Connecticut's air quality attainment planning needs and requirements."* The regional offset provisions applying to NOx are not consistent with the requirement of PA 07-242 that such offsets come from Connecticut sources. Additionally, the absence of required offsetting emission reductions for PM, greenhouse gas, and other pollutants is inconsistent with the requirements of PA 07-242 that *any* emission increases be offset "by emission decreases from sources in Connecticut."

As the department is aware, air quality in Connecticut is typically at its worst, most unhealthy levels on the hottest summer days when energy demand is at its highest level. The general permit would allow generators to operate and emit pollutants on such days. However, any required offsets apparently would not be required to apply to those same days. The result is that these provisions would likely result in an increase in polluting emissions on those days when Connecticut's air quality is already at its worst. Again, this is not consistent with the clear intent of PA 07-242.

We urge DEP to revise the general permit to ensure that it provides sufficient protection to avoid increases in Connecticut's air pollution from operation of generating units, protects the public health, and complies with both state and federal law.

Sincerely,

Christopher D. Phelps
Program Director
Environment Connecticut

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

November 9, 2007

Sharon Rowe-Johnson
Department of Environmental Protection
Bureau of Air Management
Engineering and Technical Services Division
79 Elm Street
Hartford, CT 06106-5127

Dear Ms. Rowe-Johnson:

The Connecticut DEP is currently developing a general permit for new and existing emergency engines and distributed generation resources. As mentioned within our September 7, 2007 correspondence, we support Connecticut's effort to streamline the permitting process for small electric generators, provided that it can be done with no net increase in emissions in the state.

We have reviewed the October 3, 2007 version of the draft permit, and offer the comments included in the Enclosure. If you have any questions on these comments, please contact Bob McConnell of my staff at 617-918-1046.

Sincerely,

David Conroy, Chief
Air Programs Branch

Enclosure

cc: Anne Gobin, CT-DEP
Paul Farrell, CT-DEP

Enclosure

EPA Comments on General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource

October, 2007

1. Connecticut's general permit for distributed generation resources could result in emission reductions and reduced fuel use by electric generating units (EGUs) in the state. However, this will only occur if the EGU's that currently operate in "spinning reserve" mode cease to operate in that capacity as sufficient distributed generation resources are brought into the Department of Public Utility Control's (DPUC's) pilot program. Connecticut should work to ensure that the EGUs serving in spinning reserve mode are idled as this program moves forward. The addition of the requirement that applicants purchase for retirement two CAIR NOx allowances will help minimize the impact of the emissions from the distributed generation resources, but as mentioned the emission reduction benefit will be maximized if the spinning reserve units stop serving in that capacity.

2. It is not clear what information section 4(c)(4)(BB) seeks. This section should be re-phrased.

3. The numbering is incorrect within Section 4(c). The provision "Registration Form" should be numbered (3), not (4).

4. Section 5(a)(3) provides particulate matter control requirements that vary in stringency based on the engine's distance to sensitive receptors. What is the basis for these distances?

5. The following sentence within Section 5(b)(1) should be modified as shown in underlined text:

> *"Such testing shall be performed in accordance with section 22a-174-5 of the Regulation of Connecticut State Agencies or other methods identified by the Commissioner and approved by EPA."*

6. Section 6(a)(2)(A) requires offsets when there is an exceedance of the general permit's cap. The offsets required are:

> *"The permanent retirement of a minimum of $5,000 of ozone season allowances from the CAIR NOx Ozone Season Trading Program rounded up to the next allowance;*
>
> *By any other means deemed acceptable by the Commissioner that provides emission decreases in Connecticut consistent with Connecticut's air quality attainment planning*

needs and requirements."

The first option should be revised to be tied to a specific number of allowances, rather than a dollar amount. The second option is too vague and allows for too much state discretion.

Rowe-Johnson, Sharon

From: Sylvia Broude [sylvia@toxicsaction.org]
Sent: Friday, November 09, 2007 3:01 PM
To: Rowe-Johnson, Sharon
Cc: rsmith@cleanwater.org
Subject: Written Testimony Regarding the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource

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November 9th, 2007

Written Testimony Regarding the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource

Thank you for allowing the opportunity to submit written comments.

My name is Sylvia Broude and I am a community organizer for Toxics Action Center. Toxics Action Center is a public health and environmental non-profit organization that works side by side with communities to clean up and prevent pollution in neighborhoods. We work throughout New England and opened our Connecticut office in 1997.

I want to comment on the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource. Diesel pollution threatens public health and the Department of Environmental Protection (DEP) should issue the strongest possible regulations for diesel generators.

Connecticut already suffers from high levels of diesel pollution. Fairfield, New Haven and Hartford Counties all rank within the top 7% of counties in the nation for health risks from diesel exhaust. Diesel pollution contains respiratory irritants, carcinogens, and fine particulate matter and has been linked to asthma attacks and heart attacks. Diesel soot has been linked with cancer.

Diesel generators in particular threaten public health because they can be sited anywhere. Unlike power plants which are centralized, generators can be located inside of buildings, in residential neighborhoods, nearby commercial shopping areas, and in hospitals. Furthermore, information about the locations of diesel generators is often unavailable to the public.

The General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource is too weak to effectively protect public health. The draft permit only requires 85% particulate pollution controls if the device is sited less than 328 feet from sensitive populations, 20% particulate pollution controls if sited between 328 feet and 500 feet from sensitive populations, and requires no particulate pollution controls at all if the generator is more than 500 feet from sensitive populations. Studies show that particulate pollution can spread to communities miles away from its source. We should be using the strongest pollution controls available to protect public health in Connecticut. Small particulate pollution is especially

hazardous and is linked with premature death. The Department of Environmental Protection should require 85% effective diesel particulate filters on all diesel generators that are getting paid to run at non-emergency times.

Diesel generators expose the public to a whole host of airborne toxins. Businesses and institutions in the state should have to demonstrate that they have tried to reduce their peak demand through energy efficiency or installing renewable energy systems before getting paid to run diesel generators. Because of high emissions rates, diesel generators should be a last resort.

I urge the department to strengthen the General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource and more fully protect human health in the state.

Sylvia Broude
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"Celebrating 20 years of cleaning up and preventing pollution."

Rowe-Johnson, Sharon

From: Kasey Jacobs [kjacobs@citizenscampaign.org]
Sent: Friday, November 09, 2007 5:24 PM
To: Rowe-Johnson, Sharon
Cc: Adrienne Esposito
Subject: Written Testimony for General Permit

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Empowering Communities, Advocating Solutions.

Friday, November 9th, 2007

Department of Environmental Protection
Attention: Ms. Sharon Rowe-Johnson
Bureau of Air Management, Engineering and Technical Services Division
79 Elm Street, 5th Floor
Hartford, Connecticut 06106-5127

Re: Written Testimony Regarding the Notice of Intent to issue a General Permit to Construct and/or Operate Certain New or Existing Emergency Engine or Distributed Generation Resource

Dear Ms. Rowe-Johnson,

Regretfully, I was unable to attend the public hearing today in regards to the general permit to construct and/or operate certain new or existing emergency generators. I submit these comments on behalf of Citizen Campaign for the Environment's (CCE) 80,000 members in Connecticut and New York.

CCE is a non-profit, non-partisan advocacy organization working for the protection of public health and the environment. Protecting our air quality is of the great importance to CCE and thus we have worked to improve regulations and requirements for diesel engines in the region.

The American Lung Association's *State of the Air 2007 Report* gives failing grades to the following Connecticut counties for high ozone days: Fairfield, Litchfield, Middlesex, New Haven, New London, and Tolland. High levels of ozone can result in chest pain, congestion and coughing. Studies have found that up to seven percent (7%) of hospital admissions in the summer can be attributed to smog. In addition, fine particulate matter or PM2.5 has been linked with premature death, cardiovascular disease, heart attacks, chronic bronchitis, and many lung-related ailments. Diesel emissions account for a large portion of pollution degrading local air quality, including: PM 2.5, nitrogen oxide, (NO_x), and acid rain causing sulfur dioxide (SO_2).

CCE believes the draft permit is not strong enough to address the apparent link between poor air quality in Connecticut and respiratory health. Because of high emissions rates, diesel generators should be a last resort. DEP should require 90% effective diesel particulate filters on *all* diesel generators that run at non-emergency times.

Increased reliance on diesel generators may undermine the state efforts and progress to reduce particulate matter through other air quality programs, aggressive climate initiatives, and through retrofitting diesel school and transit buses with pollution controls as per the $10 million earmarked for Connecticut school buses.

In summary, CCE offers the following recommendations to strengthen the general permit:

- **Prohibit any new or existing diesel engine to operate in non-emergency situations without pollution controls. Specifically, pollution controls should reduce both smog-forming NOx and particulate matter by 90%. Antiquated or otherwise non-controllable units should not be permitted.**

- **Require efficiency and clean energy first. Permit seekers should demonstrate efforts to improve energy efficiency as well as document consideration of cleaner distributed energy generation. Since diesel units are environmentally undesirable, these units should be permitted as a last resort.**

Thank you for this opportunity to comment. If you have any questions or comments in regards to this matter please feel free to contact me at (203) 785-9080 or kjacobs@citizenscampaign.org.

Sincerely,

Kasey Jacobs
CT Program Coordinator

cc: Adrienne Esposito, CCE Executive Director

CITIZENS CAMPAIGN FOR THE ENVIRONMENT
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